

filiform, ultimately spreading. Sepals elliptic hairy, pubescent. Petals oblong-obovate, yellowish. Stamens 6, about as long as petals, not exerted. Capsule linear, slender, 1.5-3 cm, often spreading and accurately curved, glabrous or slightly glandular, many seeded, style minute; seed glabrous, minutely granular, brown black.

Fl. & Fr.: July-September.

Present status: Very Rare.

Habitat: Gravelly, sandy, soil near water bodies.

Specimen examined: PSN 891a.

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33. OCCURRENCE OF *HIBISCUS RADIATUS* CAV. (MALVACEAE) IN PUNJAB

During November 1999, some fruiting plants were observed growing in a wasteland at Patiala. In 2000, the specimens were gathered while flowering and fruiting, and the species identified as *Hibiscus radiatus* Cav. This species has not been reported earlier from Punjab (Sharma 1990, 1994). Further, in the most recent work on the Malvaceae of India (Paul 1993), its range of distribution has been recorded from several states, but not from any state of northwest India including Punjab. Apparently, it is a new introduction to the flora of Punjab State. Brief information about the specimen collected is given below.

Hibiscus radiatus Cav. Diss. 3: 150.t.54.f.2. 1787; Masters in Hook f. Fl. Brit. India 1: 325. 1874; Paul in Sharma and Sanjappa, Fl. India 3: 327.f.90.1993.

Description: Erect undershrub, up to 1.5 m tall. Stems covered with long simple hairs and bulbous-based retrorse prickles, ultimately glabrescent. Leaves 3-15 x 1.5-12 cm, palmately 3-5 (-7)-lobed nearly to base; lobes variable, linear to lanceolate, ovate to oblong or obovate,

coarsely or sharply serrate, acute to acuminate, glabrous or with stout hairs on veins beneath; petioles 2-15 cm long, unarmed or sparsely aculeate; stipules 5-8 mm long, linear, bristly. Flowers solitary, axillary, showy, 5-6 cm across, purple with a darker centre; pedicels up to 2.5 m long, jointed, pubescent below the joint. Bracteoles (epicalyx – segments) 8 or 10, 1.5-1.8 x 0.15-0.2 cm, linear, acute, forked at apex, covered with bulbous-based bristles 1-2 mm long, often with an appendage on the inner side towards apex. Calyx 1.8-2 cm long, accrescent and stiff in fruit; lobes ovate to deltoid, long – acuminate, glabrous inside, bristly outside. Petals obovate, sparsely hairy outside. Staminal tube 1.5-2.2 cm long with laxly arranged anthers throughout. Ovary 5-7 mm long, globose, white-hirsute; style-arms purple; stigmas capitellate, dark purple. Capsules 2-2.5 x 1.2-1.5 cm, ovoid, shortly beaked, bristly, longitudinally 5-valved. Seeds 4 mm across, scabrous, brown.

Notes: The species under report belongs to the section *Furcaria* characterized by prickly stems, linear to lanceolate bracteoles forked at

apex and prominently 3-veined calyx-lobes. Within this section, this species is likely to be confused with the closely allied species *H. aculeatus* Roxb. (syn. *H. furcatus* Roxb.) because of prickly petioles and pedicels, non-foliaceous stipules and similar flowers. However, the latter species is a rambling or trailing undershrub which has undivided leaves or if leaves 3-5-lobed then lobed up to about middle only, ovate-lanceolate stipules and smaller fruits (1.2-1.5 cm long). Further, there are two important features in which the description given here differs essentially from the one given by Paul (1993) who describes pedicels 2-4 mm long and flower yellow with dark purple centre. However, in both these features the description given above matches with the one provided by Cooke (1958, pedicels 0.5-1 inch long) and Masters (1874,

corolla yellow with a crimson centre or all purple).

Fl. & Fr.: September-December.

Illustration: Paul (*loc. cit.*)

Material examined: Urban Estate, Patiala; coll. M. Sharma 16669, 16670 (PUN).

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34. EXTENDED DISTRIBUTION OF TWO RARE AND ENDANGERED TAXA FROM TIRUNELVELI HILLS, WESTERN GHATS, TAMIL NADU

During plant explorations in the Kalakad-Mundanthurai Tiger Reserve (KMTR), Tamil Nadu, special attention was given to relocate the rare and threatened taxa, which resulted in the relocation of two species namely *Memecylon flavescens* Gamble (Melastomataceae), and *Ilex denticulata* Wall. ex Wight (Aquifoliaceae) (Henry *et al.* 1978, Nair and Henry 1983, Nayar and Sastry 1990, Sivarajan and Mathew 1996). They were critically studied in the Botanical Survey of India, (MH), Coimbatore. The specimens are deposited in St. Xavier's College Herbarium (XCH), Palayamkottai. The present finding extends the known distribution of these

species. For easy identity, short descriptions including phenology, ecology and distribution are given.

Memecylon flavescens Gamble Kew Bull. 1919:226. 1919 & Fl. Pres. Madras 1:503. 1997 (rep. edi.); K. Vivekananthan in Nair & Henry, Fl. Tamil Nadu 1:160. 1983; Ahmedullah & Nair, End. Pl. Indian Region 1:109. 1986; Sivarajan & Mathew, Fl. Nilambur 3:270. 1996.

Shrub to 1 m; branchlets sub-terete, glabrous, woody. Leaves decussate-opposite, elliptic-ovate, 2-5 x 1.5-2.5 cm, membranous, glossy, yellowish-green when dry, base cuneate, margin entire, recurved, apex obtuse-acute with